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FOR. SCIENCE SUMMARY NO. 2

Christmas Tree Greetings From The USDA Forest Service



NO. 2



No Christmas celebration is complete without a tree. Likewise, no holiday is really festive unless it features a tree that is fresh, green, and beautiful--in short, one that you can be proud of.

To help you find the best possible Christmas tree and then to help you keep it that way throughout the holidays, USDA Forest Service Researchers have compiled this holiday tree greeting with suggestions for you: ON BUYING AND CARING FOR YOUR CHRISTMAS TREE . . . ON CARING FOR YOUR BALLED CHRISTMAS TREE . . . and ON GROWING CHRISTMAS TREES, DESPITE THE PRESENCE OF AIR POLLUTION.

Additional information may be obtained from:

Information Services Tel--(Area Code 215) FL 2-5800, Ext--288.



NORTHEASTERN FOREST EXPERIMENT STATION • UPPER DARBY, PENNSYLVANIA 19082



BUYING AND CARING FOR YOUR CHRISTMAS TREE

To insure the best possible tree at home, plan to care for it properly once you've bought it. Here are some tree buying and handling tips:

Select a tree that is fresh and green. To test for freshness, bend a needle and check its resilience. Bump the base of the tree hard on the ground to be sure the needles won't fall. (Some species--spruce, for example--do not retain their needles very well. This is characteristic of the tree and does not necessarily reflect a lack of freshness.) Finally, feel the bottom of the stump to make certain it feels sappy moist.

Store the tree outdoors before use and conserve moisture by keeping it in a spot that is sheltered from sun and wind.

To facilitate water uptake, cut an inch off the butt end before placing the tree in a stand. Use warm water in the stand initially.

Water the tree daily while it is in the house. A tree can absorb a pint to a quart of water a day.

Avoid placing the tree near heat sources that might cause the water to evaporate from the tree too quickly.

For safety, keep flammable materials away from the tree and do not place lighted candles on the tree. Always check lights and wiring for worn spots and cracks before use, and do not overload electric circuits.

CARING FOR A BALLED CHRISTMAS TREE

Balled trees should only be kept indoors for as short a time as possible. Enclose the burlap ball in plastic to conserve its moisture.

It is wise to have your planting site selected and your hole dug before the holidays. This hole can be kept open by filling it with mulch material that does not freeze.

To further conserve moisture after planting, continue to protect a new plant with shade. Polyvinyl chloride in an aerosol suspension can also be sprayed on the needles to close off some needle stomates and to slow moisture loss through evapotranspiration.



White Fir



White Pine



Scotch Pine



Balsam Fir

GROWING CHRISTMAS TREES, DESPITE THE PRESENCE OF AIR POLLUTION

Sulfur dioxide, fluorides, and ozone are the major tree despoilers; individual trees respond differently according to location, species, genetic make-up, and stage of growth. If you plan to grow your own Christmas trees, you should look for nearby pollution sources since the proximity of the source and concentration of the pollutant, as well as duration of the pollution onslaught, can be crucial.

Air pollution can injure conifers more severely than hardwoods. Because pollutants attack foliage, they can cause conifers to lose their year-round needles prematurely. Without needles, and the ability to maintain normal food-production levels, trees become weakened and vulnerable to a host of insects, diseases, and other environmental stresses. Death often follows.

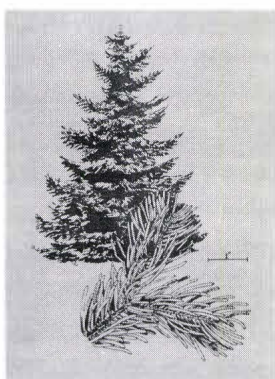
Dr. Leon S. Dochinger, a Forest Service plant pathologist in Delaware, Ohio, has compiled a list of tree responses to various pollutants. He urges nurseries to test their seedlings for responses to these pollutants before outplanting to insure the identification of problems before tree stock is distributed. *Some observed pollution responses follow:*

Species	Sulfur dioxide	Hydrogen fluoride	Ozone	Oxides of nitrogen	Peroxyacetyl nitrate	2-4-D	Chlorine	Hydrogen chloride	Mercury vapor
Balsam fir	I	..	T	..	..	..	..	..	..
White fir	I	..	I	..	..	..	..	..	..
Eastern redcedar	T	T	..	..	..	..	..	..	..
Norway spruce	..	..	T	..	..	..	..	..	..
Blue spruce	..	S	T	S	T	I	..	..	..
Lodgepole pine	I	S	..	..	..	..	..	..	..
Austrian pine	T	..	S	S	T	..	..	..	..
White pine	S	S	S	S	T	..	S	T	S
Scotch pine	..	S	S	..	..	..	..	..	..
Douglas fir	I	S	T	..	T	..	..	..	..

T = Tolerant; the tree species shows little or no sensitivity to a specific pollutant.

I = Intermediate; the tree species shows some response to the air pollutant, but is not truly tolerant.

S = Sensitive; the species is susceptible to a specific pollutant.



Grand Fir



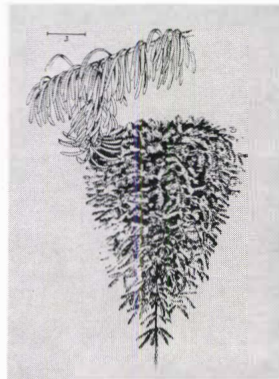
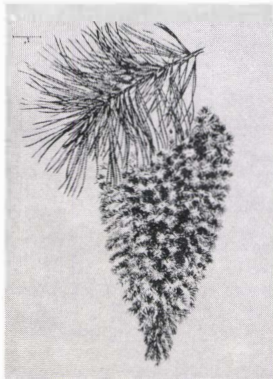
Douglas Fir



Blue Spruce



Austrian Pine



Christmas Tree Research

on: Buying
: Caring
: Growing

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